

Fig. 1

Fig. 2

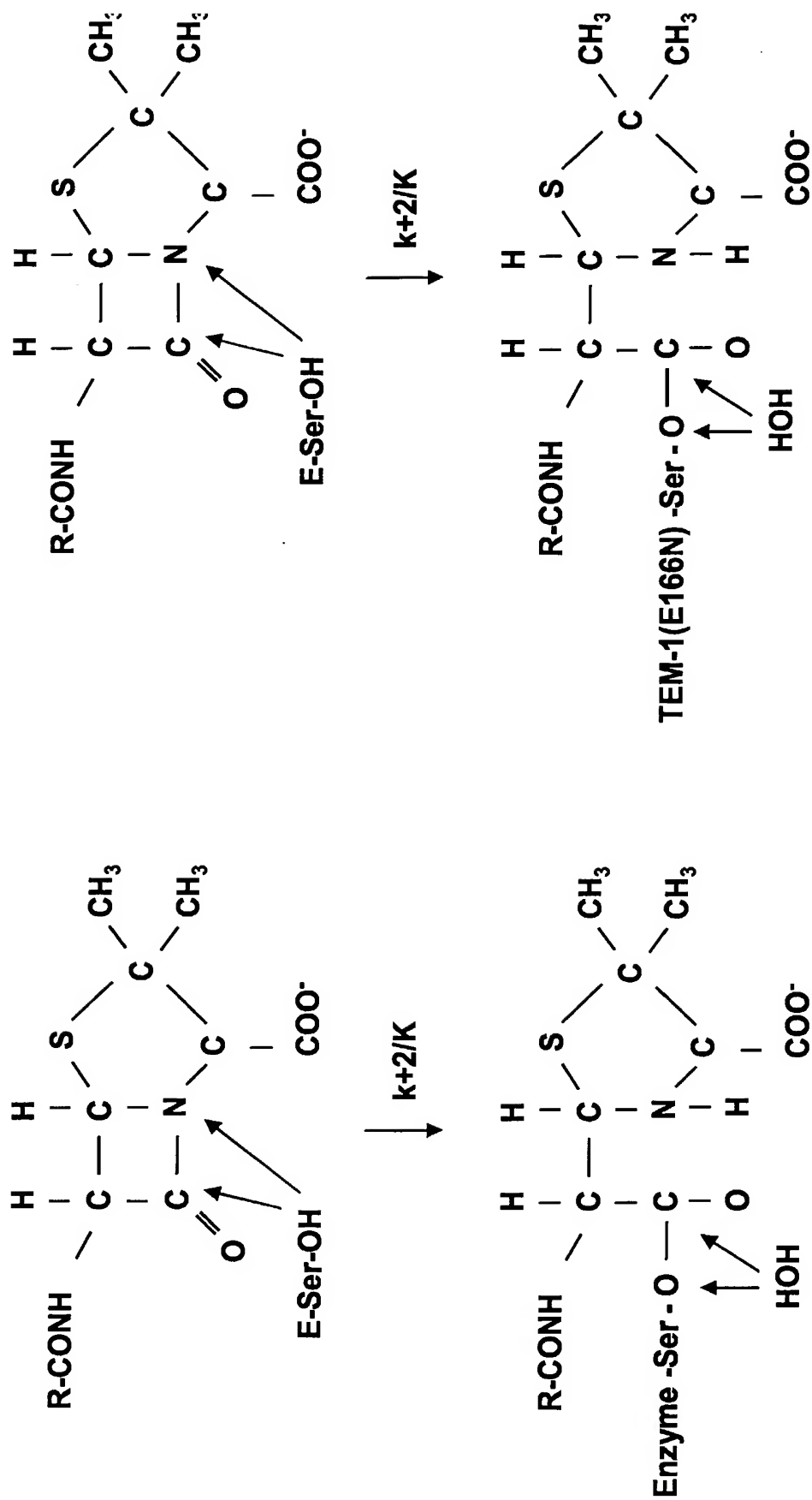
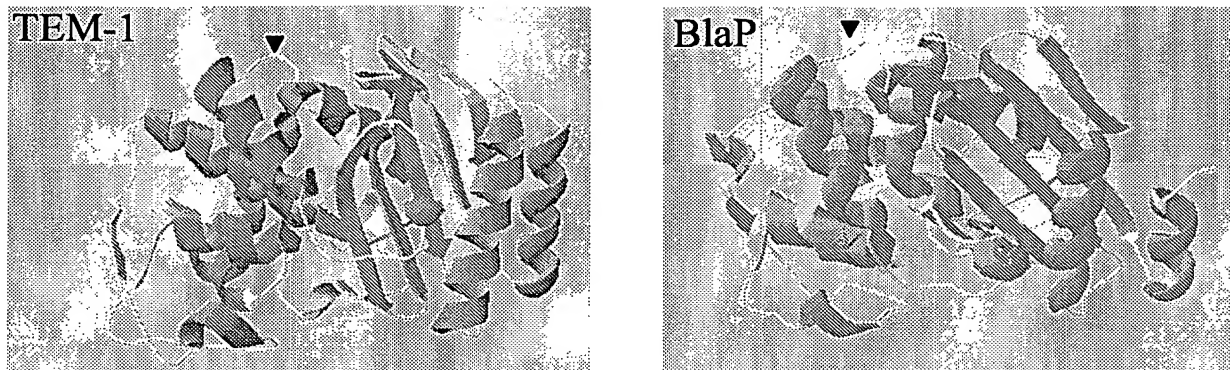


Fig. 3

|                             |  |
|-----------------------------|--|
| TEM-1<br>WT                 | Leu Leu Thr Gly Glu Leu Leu Thr Leu Ala<br>CTA-TTA- ACT- GGC- GAA- CTA- CIT- ACT- CTA- GCT   |
| TEM-1<br>197 <i>KpnI</i>    | Leu Leu Thr Gly Val Pro Leu Thr Gly Thr Leu Ala<br>CTA-TTA- ACT- GGG- GTA- CCC- CTA- ACT- GGC- ACT- CTA- GCT<br><i>KpnI</i>  |
| TEM-1<br>197<br>cartridge 1 | Leu Leu Thr Gly Val Pro Pro Gly Leu Gln Leu Glu Leu Lys Pro Gly Arg Tyr Pro Leu Thr Gly Glu Leu<br>CTA-TTA- ACT- GGG- GTA- CCG- CCC- GGG- CTG- CAG- CTC- GAG- CTT- AAG- CCC- GGG- TAC- CCC- CTA- ACT- GGC- GAA- CTA<br><i>KpnI</i> <i>SmaI</i> <i>PstI</i> <i>XhoI</i> <i>AflIII</i> <i>SmaI</i> <i>KpnI</i> |
| TEM-1<br>197<br>cartridge 2 | Leu Leu Thr Gly Val Pro Pro Gly Arg Tyr Pro Leu Thr Gly Glu Leu<br>CTA-TTA- ACT- GGG- GTA- CCG- CCC- GGG- CGG- TAC- CCC- CTA- ACT- GGC- GAA- CTA<br><i>KpnI</i> <i>SmaI</i> <i>KpnI</i>  |

**Fig. 4****Fig. 5**

|                 |     |       |       |       |             |              |            |       |       |       |       |       |
|-----------------|-----|-------|-------|-------|-------------|--------------|------------|-------|-------|-------|-------|-------|
| <b>BlaP</b>     | Ala | Leu   | Glu   | Asp   | Lys         | Leu          | Pro        | Ser   | Glu   | Lys   |       |       |
| <b>Wt</b>       | GCT | - CTT | - GAA | - GAT | - AAA       | - CTT        | - CCA      | - AGT | - GAA | - AAA |       |       |
| <b>BlaP 211</b> | Ala | Leu   | Glu   | Asp   | <i>Pro</i>  | <i>Gly</i>   | Lys        | Leu   | Pro   | Ser   | Glu   | Lys   |
| <b>SmaI</b>     | GCT | - CTT | - GAA | - GAT | <u>CCC</u>  | <u>GGG</u>   | - AAA      | - CTT | - CCA | - AGT | - GAA | - AAA |
|                 |     |       |       |       | <i>SmaI</i> |              |            |       |       |       |       |       |
| <b>BlaL</b>     | Val | Glu   | Asp   | Gly   | Glu         | Lys          | Ala        | Ala   | Leu   | Ala   |       |       |
| <b>WT</b>       | GTC | - GAG | - GAC | - GGC | - GAG       | - AAG        | - GCC      | - GCC | - CTC | - GCG |       |       |
| <b>BlaL 203</b> | Val | Glu   | Asp   | Gly   | Glu         | <i>Asp</i>   | <i>Ile</i> | Lys   | Ala   | Ala   | Leu   | Ala   |
| <b>SmaI</b>     | GTC | - GAG | - GAC | - GGC | - GAG       | <u>GAT</u>   | <u>ATC</u> | - AAG | - GCC | - GCC | - CTC | - GCG |
|                 |     |       |       |       |             | <i>EcoRV</i> |            |       |       |       |       |       |

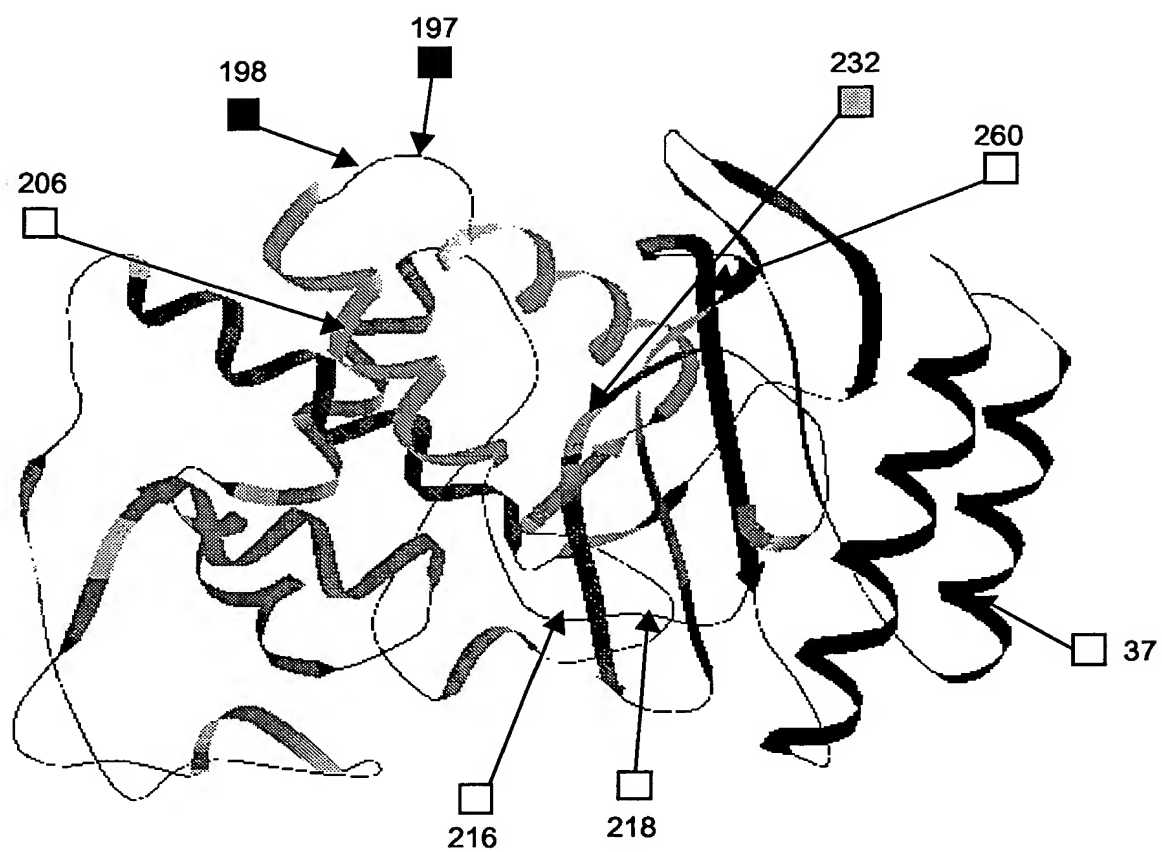
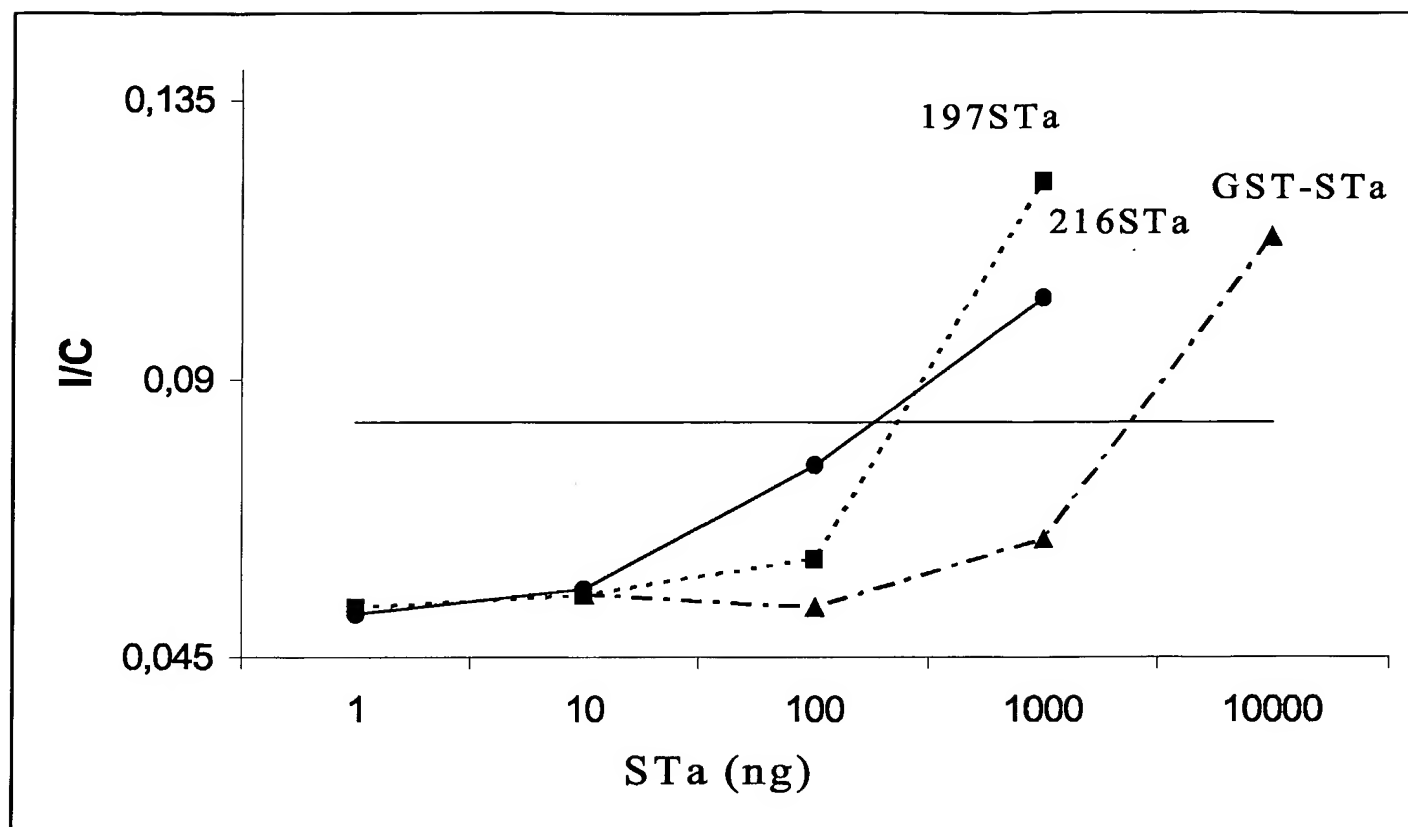
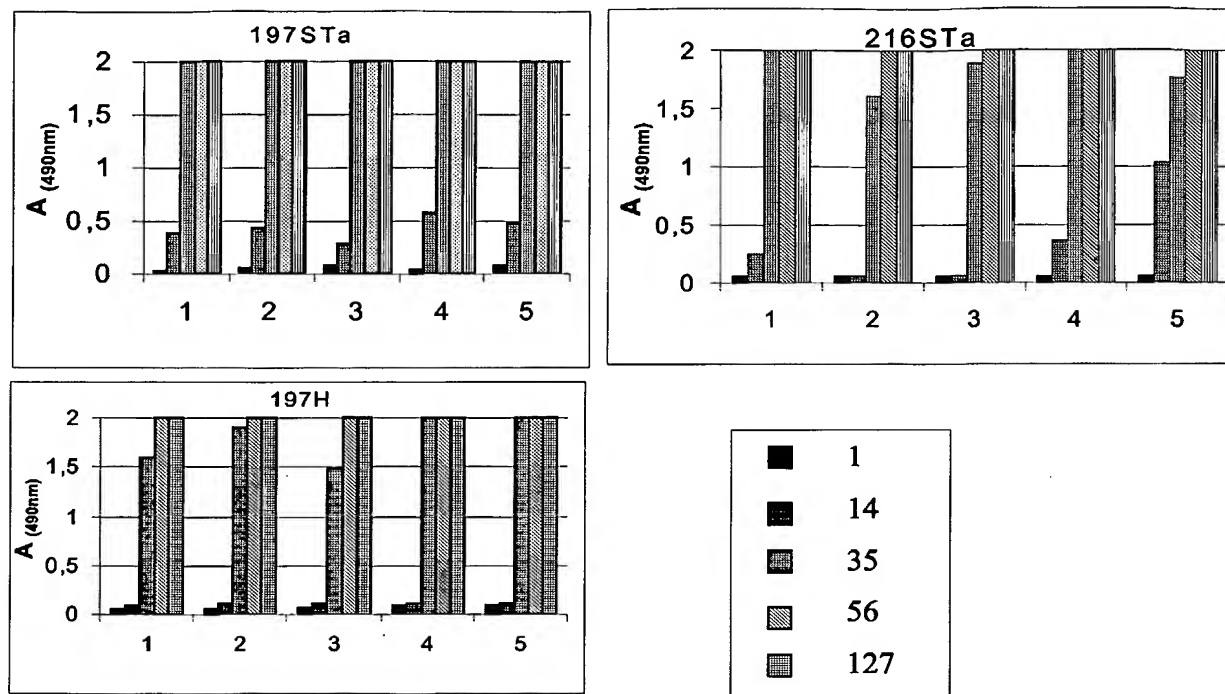
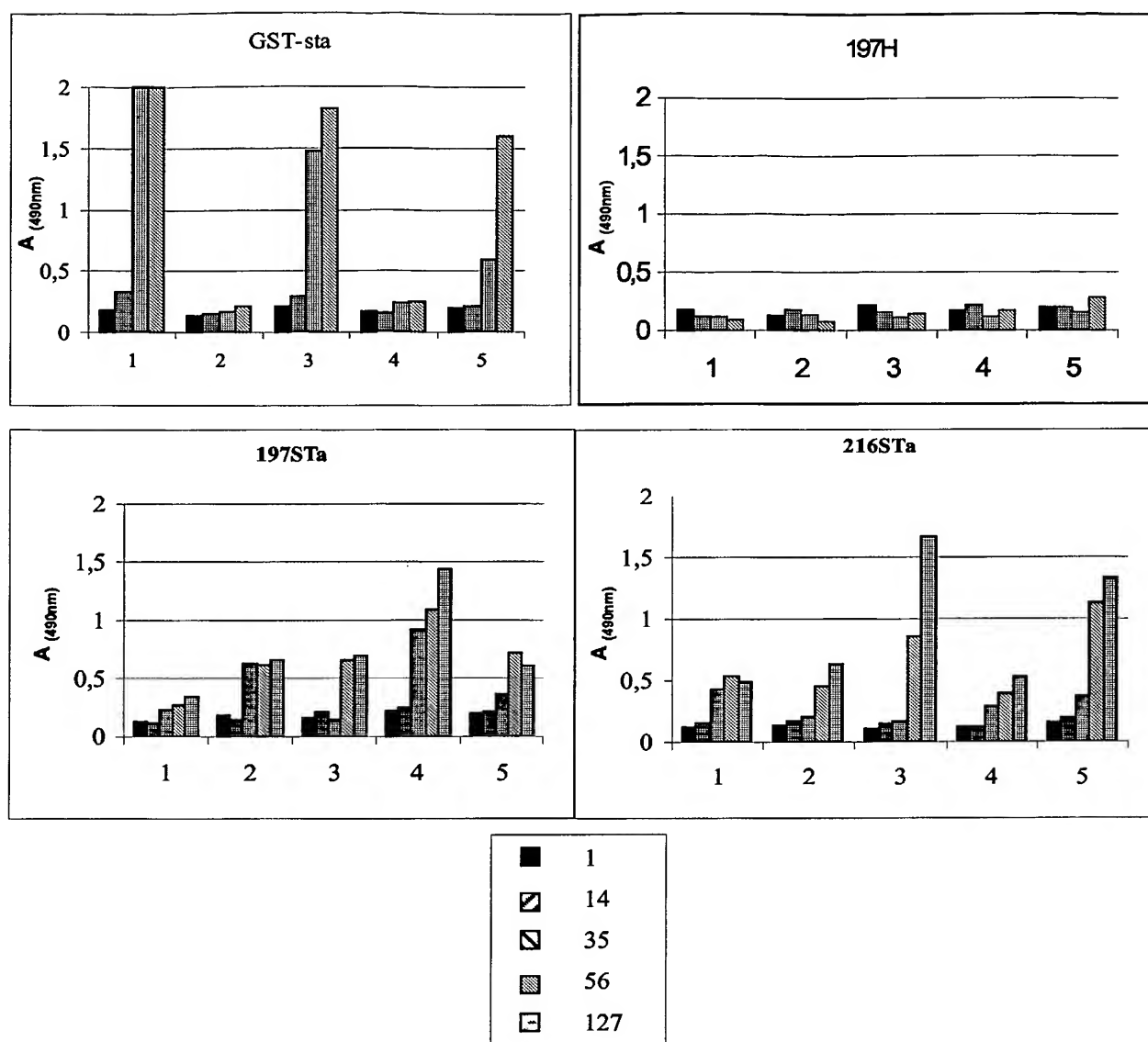
**Fig. 6**

Fig. 7



**Fig. 8A**

**Fig. 8B**



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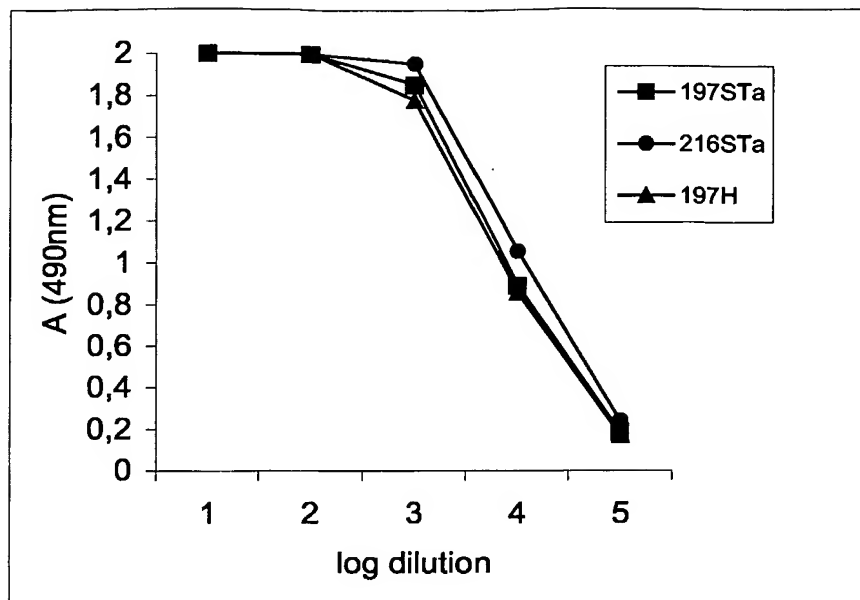
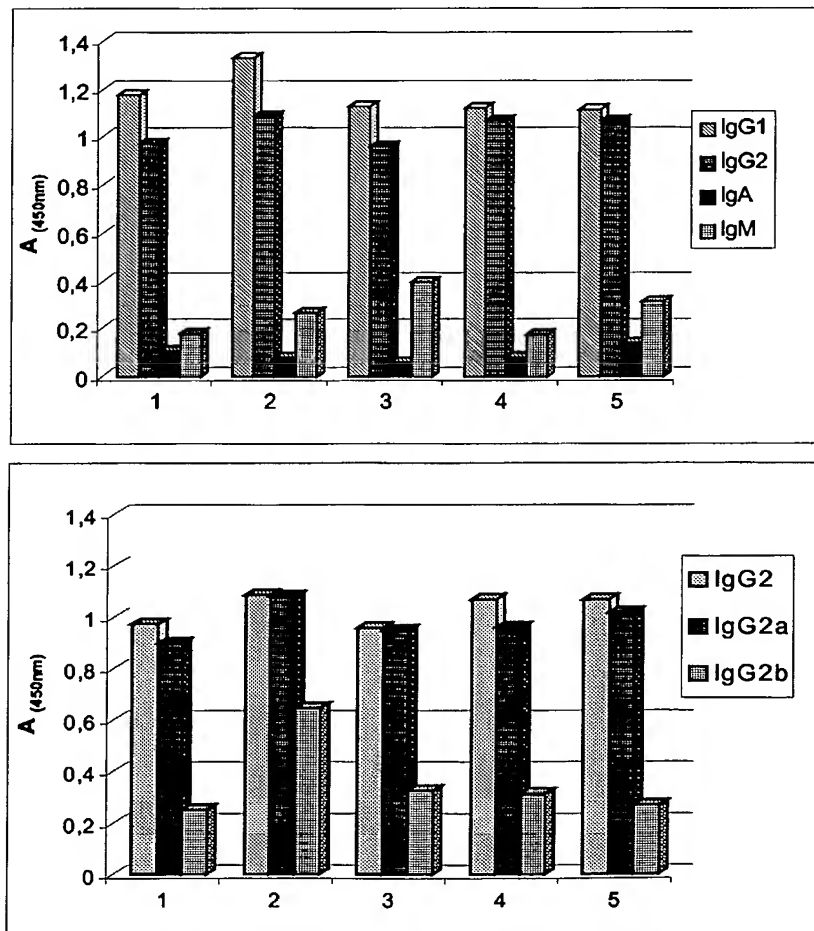
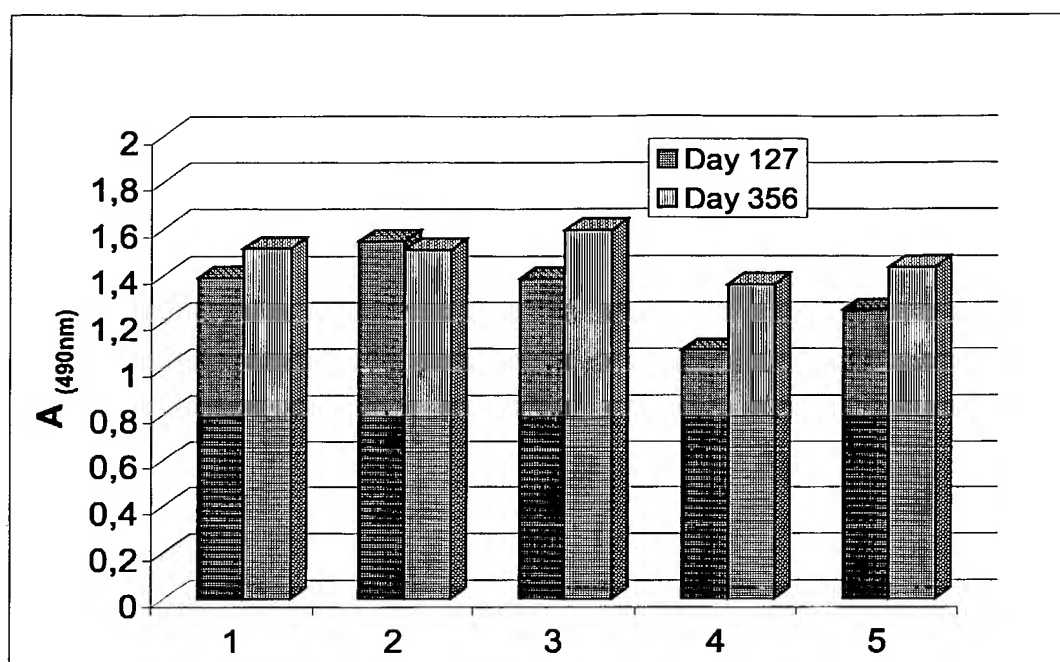
**Fig. 9****Fig. 10**

Fig. 11



**Fig. 12 A, B, C****A**

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| S | E | D | A | B | C | P |
|---|---|---|---|---|---|---|

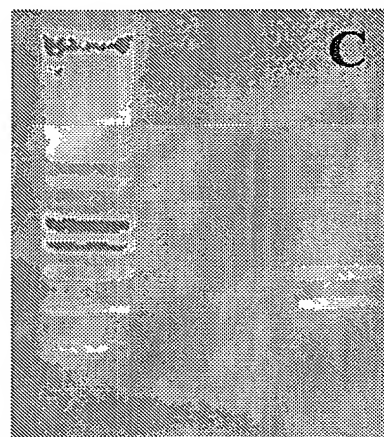
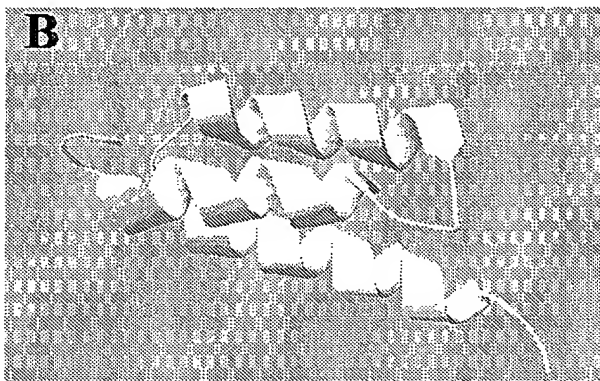
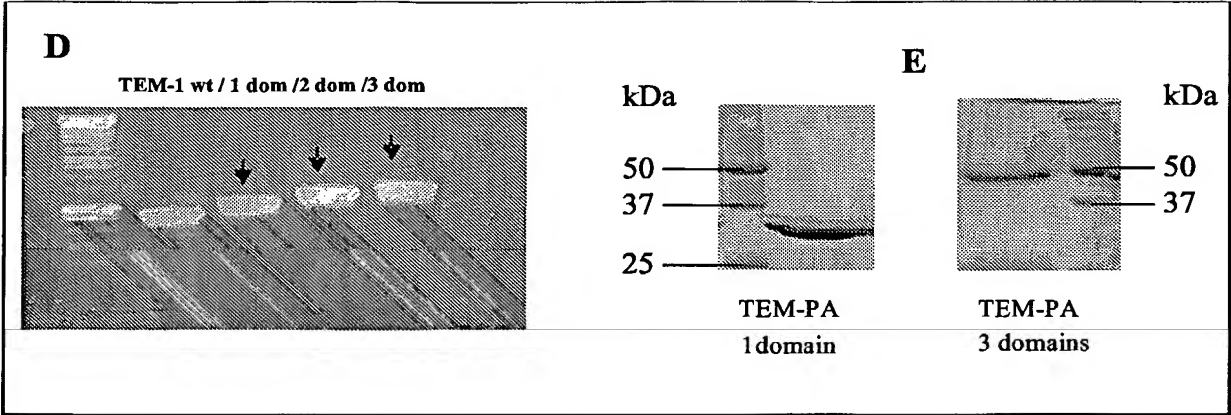


Fig. 12 D, E



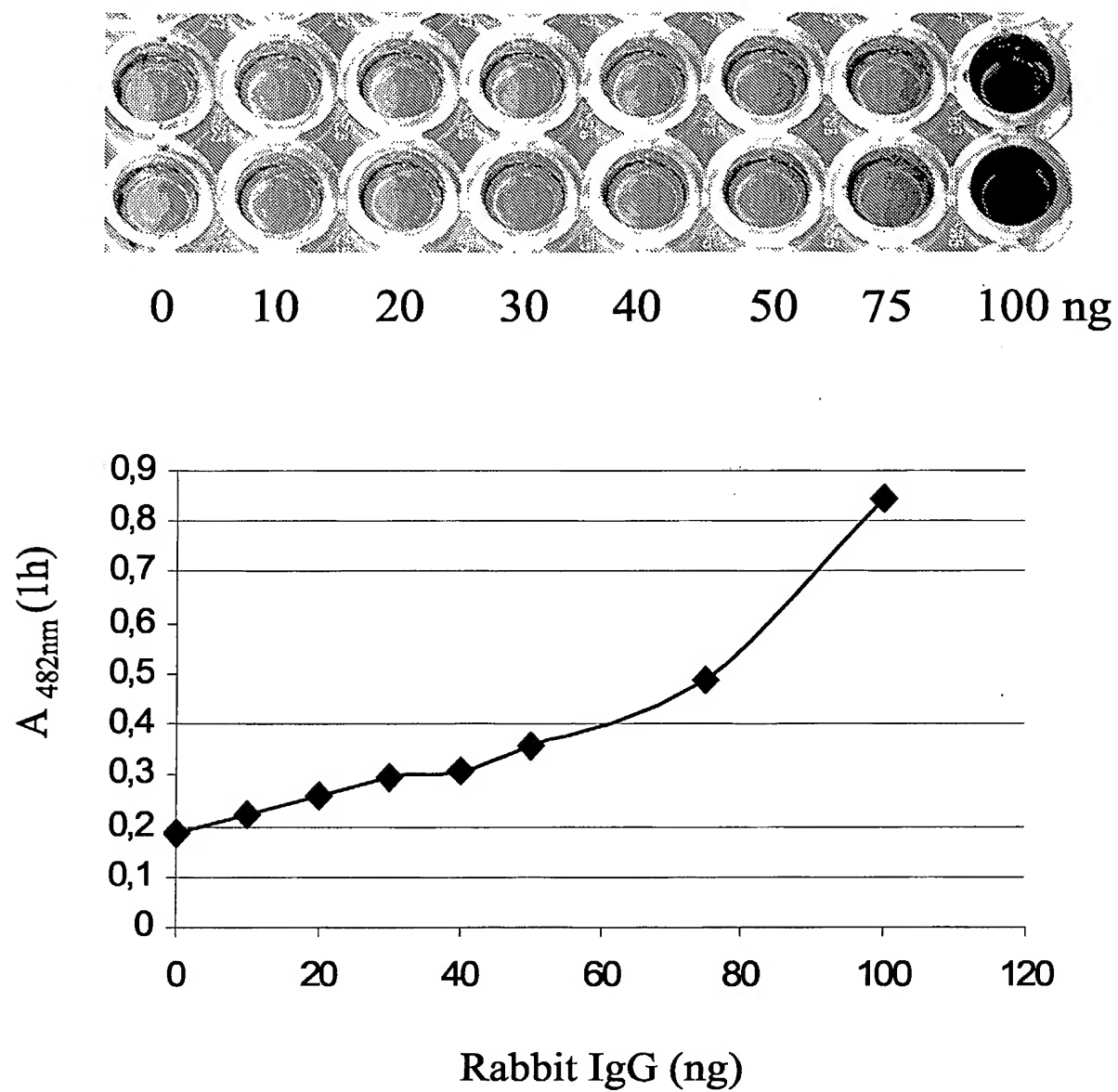
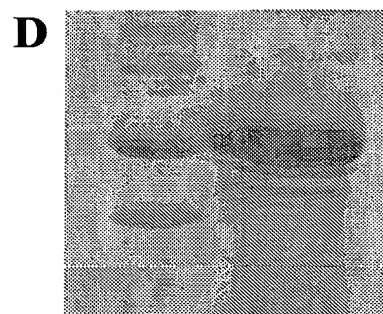
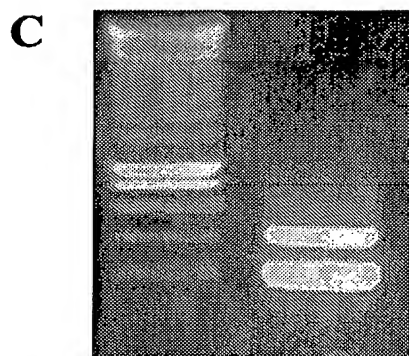
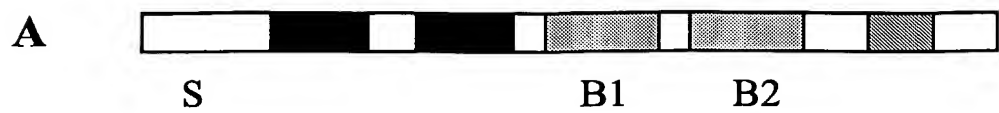
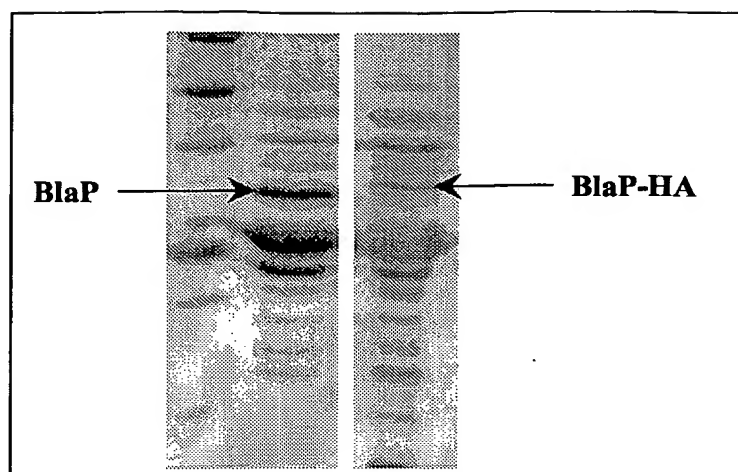
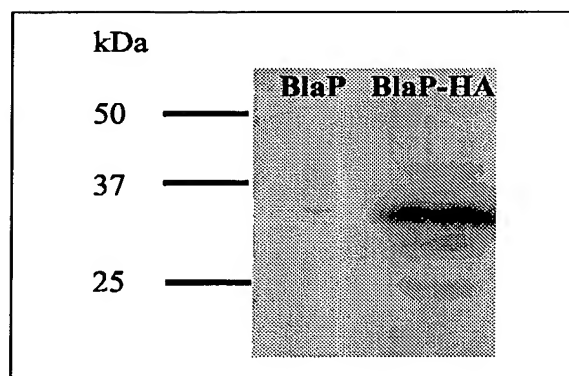
**Fig. 13**

Figure 14 A B C D





**Fig. 16****Fig. 17**



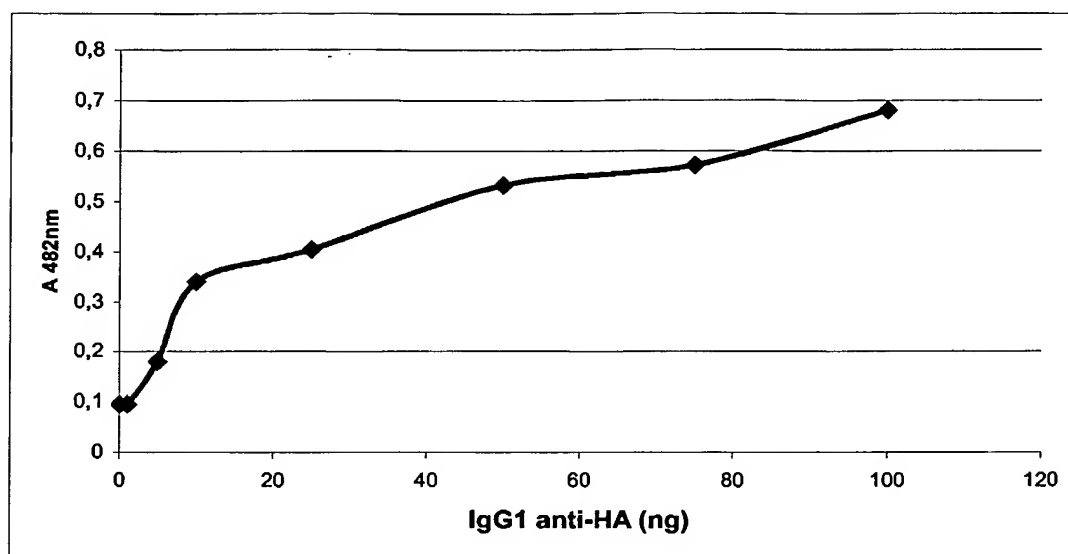
**Fig. 18**

Fig. 19

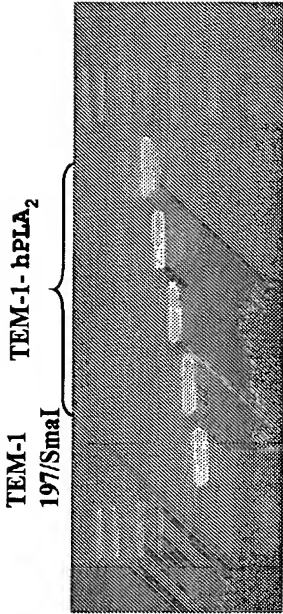


Fig. 20

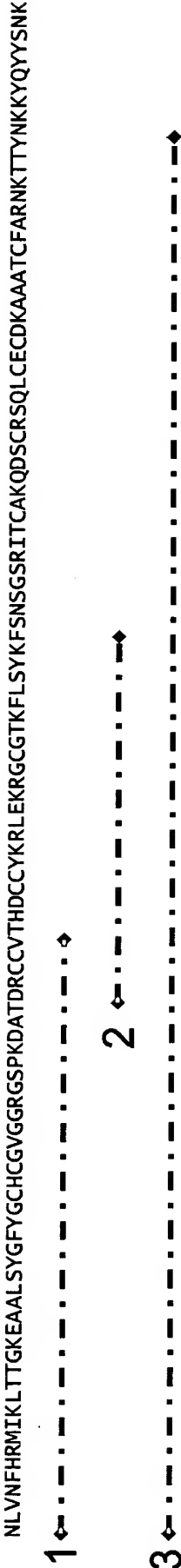
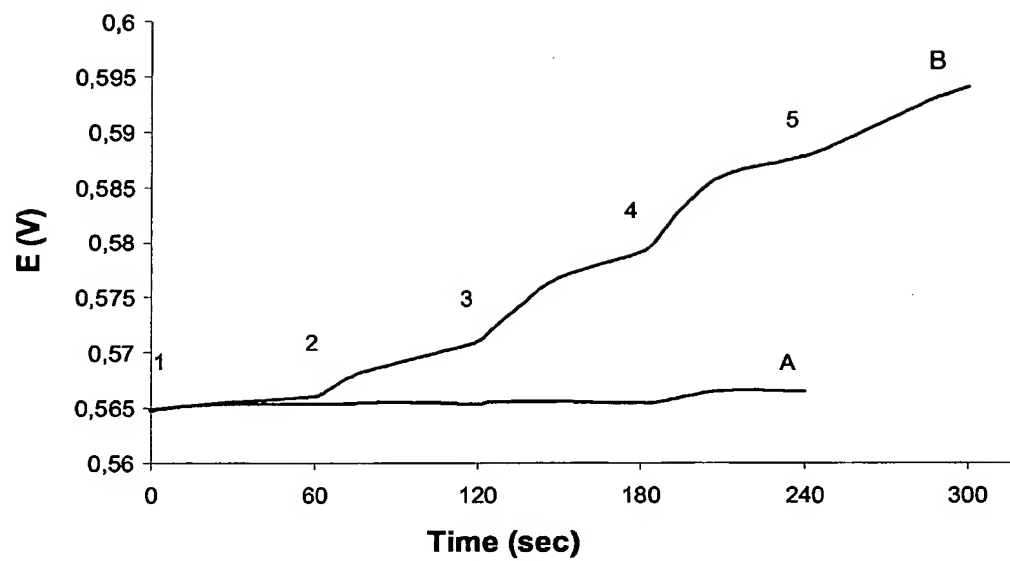
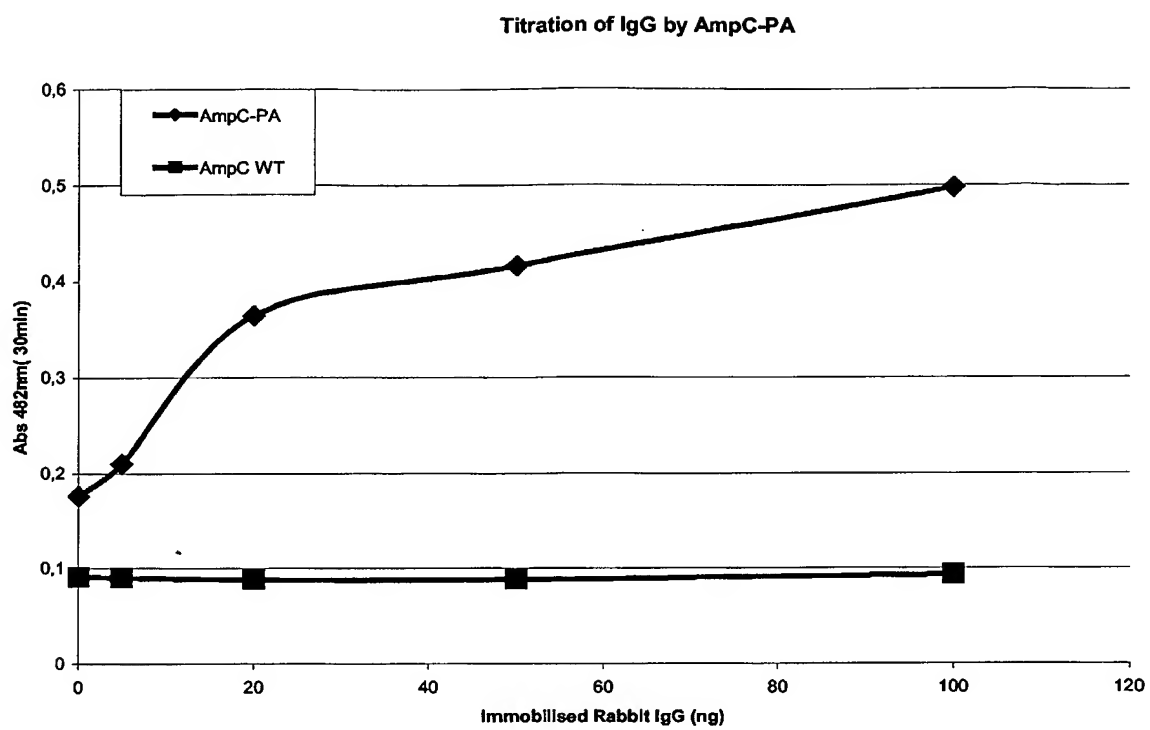
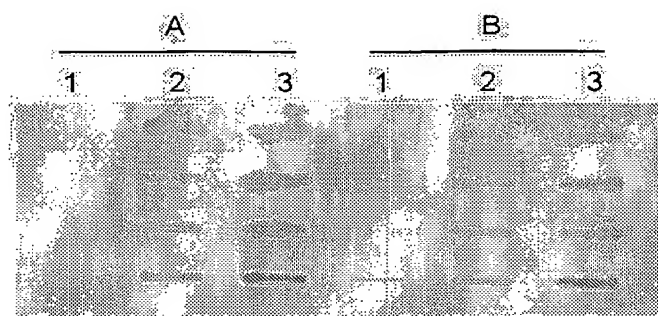
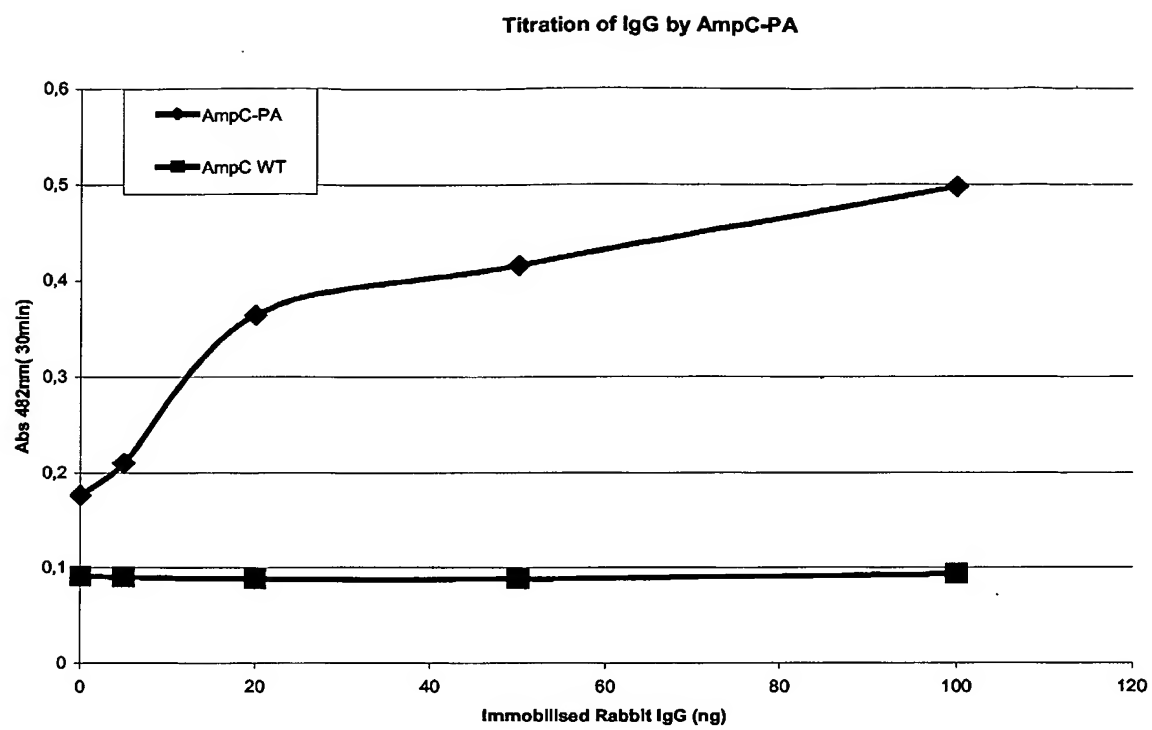


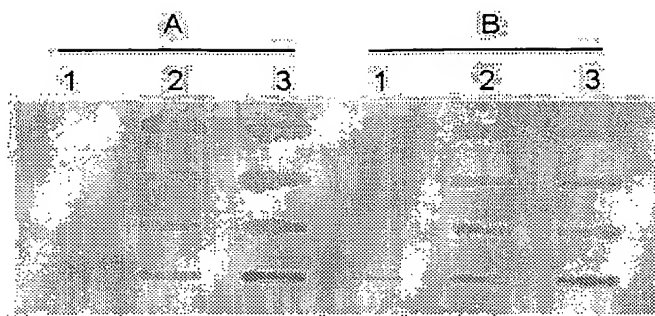
Fig. 21



**Fig. 22**

**Fig. 23**

**Fig. 22**

**Fig. 23**